Title: RARE-EARTH DOPED PHOSPHATE-GLASS LASERS AND ASSOCIATED METHODS

REMARKS

This is in response to the Office Action mailed on March 9, 2004, and the references cited therewith.

Claims 1, 17, and 42 are amended, no claims are canceled, and no claims are added; as a result, claims 1-45 are now pending in this application. The amendments to the claims are fully supported by the specification as originally filed. No new matter is introduced. The amendments are made to clarify the claims. Applicant respectfully requests reconsideration of the above-identified application in view of the amendments above and the remarks that follow.

§102 Rejection of the Claims

Claims 1-45 were rejected under 35 USC § 102(b) as being anticipated by Bischel et al. (US 5,513,196).

Applicant respectfully traverses these rejections of these claims. However, to expedite prosecution on these claims, the independent claims 1, 17, and 42 have been amended to provide further clarity of these claims.

Applicant can not find a teaching or suggestion in Bischel et al. (hereafter Bischel) of an optical component having a substrate waveguide and an extended waveguide cavity in which the extended waveguide cavity is positioned adjacent to a length of the substrate waveguide and positioned along the length of the substrate waveguide where the extended waveguide cavity is coupled to the substrate waveguide so that pump light from along the extended waveguide cavity is transferred into the substrate waveguide along at least a portion of the length of the substrate waveguide as recited in claim 1.

The Office Action states "[w]ith respect to claims 1-4, 12-20, 24, 26-29, and 39-45, Bischel show in Fig.1-6 1 an optical component comprising: a glass substrate (col. 18, 1.47-57) doped with a laser species, a substrate waveguide defined within the glass substrate; and a diode pump laser 100 having a diode laser and a waveguide cavity abutted to an output facet of the diode pump laser to provide an extended waveguide cavity such that a laser resonator cavity of the diode pump laser includes the extended waveguide cavity, the extended waveguide cavity being positioned adjacent and along a length of the substrate waveguide." Applicant respectfully disagrees.

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Figures 1-5 of Bischel show that Bischel's waveguides are longitudinally aligned, which is distinctly different than two waveguides being positioned adjacent to and along a length of each other. Figure 6 of Bischel shows multiple sources in parallel. However, Bischel appears to be void of a teaching or suggestion that any of these sources of Figure 6 are structurally configured to have light transfer from one of the multiple sources to another of the multiple sources along the length of the multiple sources. Thus, Applicant submits that Bischel does not teach or suggest all the elements as arranged in claim 1. Further, since independent claims 17 and 42 recite elements similar to the elements of claim 1 discussed above, Bischel does not teach or suggest all the elements as arranged in claim 17 and 42.

Also, Applicant can not find in Bischel a teaching or suggestion of all the elements as arranged in the dependent claims. For example, Applicant can not find in Bischel a teaching or suggestion of a cladding having apertures for transmitting pump light into the substrate waveguide as recited in dependent claims 15 and 20. Further, Applicant can not find in Bischel a teaching or suggestion of transmitting pump light into the substrate waveguide via evanescent coupling as recited in claims 16 and 19. Further, Applicant can not find a teaching or suggestion of a cladding on a reflection grating as arranged in claim 6 or a composition for the reflection grating as arranged in claim 9. Additionally, since the claims depending from claims 1, 17, and 42 include the elements of their respective independent claims, Bischel does not teach or suggest all the elements as arranged in these dependent claims

Thus, Applicant respectfully submits that the Office Action did not make out a proper prima facie case of anticipation with respect to claims 1-45 for at least the following reasons:

- (1) The Bischel reference does not teach each and every claim element of claims 1-45. Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. In re Dillon 919 F.2d 688, 16 USPQ2d 1897, 1908 (Fed. Cir. 1990) (en banc), cert. denied, 500 U.S. 904 (1991).
- (2) The Bischel reference does not teach the identical invention in as complete detail as is contained in claims 1-45. "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131.

(3) The Bischel reference does not teach each and every claim element arranged as in claims 1-45. "Anticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, arranged as in the claim." Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added).

Thus, Applicant submits that Bischel does not anticipate claim 1 and that claim 1 is patentable over Bischel for at least the reasons state above. Independent claims 17 and 42 recite elements similar to the elements of claim 1 discussed above, and are patentable over Bischel for at least the reasons state above with respect to claim 1 and additionally in view of the further elements of these independent claims. The claims depending from claims 1, 17, and 42 are patentable over Bischel for at least the reasons state above with respect to claim 1 and additionally in view of the further elements of these dependent claims.

Applicant respectfully requests withdrawal of these rejections of claims 1-45, and reconsideration and allowance of these claims.

Assertion of Pertinence

Applicant has not responded to the assertion of pertinence stated for the patents cited but not relied upon by the Office Action since these patents are not relied upon as part of the rejections in this Office Action. Applicant is expressly not admitting to any assertion of their pertinence and reserves the right to address the assertion should it form a part of some future rejection.

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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